



<b>FORM PTO-1449 (Modified)</b>  <b>INFORMATION DISCLOSURE STATEMENT</b>  (Use several sheets if necessary)	Attorney Docket No.: 57715/03-507	
	Applicant(s): Raun et al.	
	Title: Use of within-field-element-size CV for improved nutrient fertilization in crop production	
	Serial No.: 10/801,757	Filing Date: 03/16/2004
	Group: 3643	Examiner: Unknown

**U.S. PATENT DOCUMENTS**

Examiner Initials		Document No.	Date	Name	Class	Subclass
OK	AA	6,601,341	08/05/2003	Raun et al.	47	58.1
	AB	6,444,975	09/03/2002	Reusch	250	222.1
	AC	6,393,927	05/28/2002	Biggs et al.	73	866
	AD	6,366,681	04/02/2002	Hutchins	382	110
	AE	6,160,902	12/12/2002	Dickson et al.	382	110
	AF	6,062,496	05/16/2000	Kinter	239	462
	AG	6,052,187	04/18/2000	Krishnan et al.	356	364
	AH	5,837,997	11/17/1998	Beck et al.	250	227.11
	AI	5,833,144	11/10/1998	Kinter	239	462
	AJ	5,809,440	09/15/1998	Beck et al.	701	50
	AK	5,793,035	08/11/1998	Beck et al.	250	222.1
	AL	5,789,741	08/04/1998	Kinter et al.	250	226
	AM	5,768,823	06/23/1998	Nelson	47	1.7
	AN	5,764,819	06/09/1998	Orr et al.	382	110

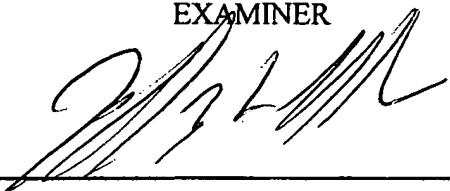
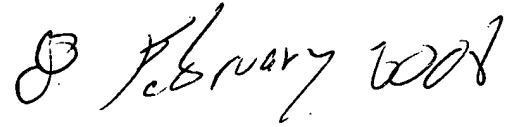
Examiner Initials		Document No.	Date	Name	Class	Subclass
<i>JK</i>	AO	5,763,873	06/09/1998	Beck et al.	250	214 B
	AP	5,606,821	03/04/1997	Sadjadi et al.	47	1.7
	AQ	5,585,626	12/17/1996	Beck et al.	250	222.1
	AR	5,507,115	04/16/1996	Nelson	47	1.7
	AS	5,389,781	02/14/1995	Beck et al.	250	226
	AT	5,296,702	03/22/1994	Beck et al.	250	226
	AU	5,222,324	06/29/1993	O'Neill et al.	47	1.7
	AV	5,144,767	09/08/1992	McCloy et al.	47	1.7
	AW	4,952,229	08/28/1990	Muir	71	7
	AX	3,910,701	10/07/1975	Henderson et al.	356	39
	AY	3,670,963	06/20/1972	Stroebe et al.	239	77
<i>JK</i>	AZ	US 2003/0019152	01/30/2003	Raun et al.	47	58.1

### FOREIGN PATENT DOCUMENTS

Examiner Initials		Document No.	Date	Name (Inventors)	Class	Translation Yes / No
<i>JK</i>	BA	DE 198 60 306 A1	03/23/2000	Reusch	A 01 C 21/00	No
<i>JK</i>	BB	DE 199 13 971 A1	09/28/2000	Wollring	A 01 C 21/00	No
<i>JK</i>	BC	WO 01/45490 A1	06/28/2001	Aspelin et al.	A 01 C 21/00	

### OTHER ART

Examiner Initial		(Including Author, Title, Date, Pertinent Pages, Etc.)
<i>JH</i>	BD	LaRuffa, J.M., et al. 2001. "Optimum field element size for maximum yields in winter wheat, using variable nitrogen rates." <i>Journal of Plant Nutrition</i> . 24(2): 313-325.
<i>JH</i>	BE	Lukina, E.V., et al. 2001. "Nitrogen fertilization optimization algorithm based on in-season estimates of yield and plant nitrogen uptake." <i>Journal of Plant Nutrition</i> . 24(6): 885-898.
<i>JH</i>	BF	Patchen Weed Seeker™ PhD1620 Brochure, Undated.
<i>JH</i>	BG	Patchen Weed Seeker™ PhD600 Brochure, Undated.
<i>JH</i>	BH	Raun, W.R., et al. 2001. "In-season prediction of potential grain yield in winter wheat using canopy reflectance." <i>Agronomy Journal</i> . 93:131-138.
<i>JH</i>	BI	Sérelé, C.Z., et al. 2000. "Detection of corn nitrogen status from airborne vis-Nir imagery using artificial neural networks." Proceedings of Fifth International Conference on Precision Agriculture. Unnumbered.
<i>JH</i>	BJ	Solie, J.B., et al. 2000. "In-season N fertilization using an in-season estimate of potential yield." Proceedings of Fifth International Conference on Precision Agriculture. Unnumbered.
<i>JH</i>	BK	Solie, J.B., et al. 1996. "Optical sensor based field element size and sensing strategy for nitrogen application." <i>Transactions of the ASAE</i> 39(6): 1983-1992.
<i>JH</i>	BL	Staggenborg, S.A., et al. 2000. "Predicting grain yield variability with infrared images." Proceedings of Fifth International Conference on Precision Agriculture. Unnumbered.
<i>JH</i>	BM	Stone, M.L., et al. 1996. "Use of spectral radiance for correcting in-season fertilizer nitrogen deficiencies in winter wheat." <i>Transaction of ASAE</i> . 39(5): 1623-1631.
<i>JH</i>	BN	Yang, C., et al. 2000. "Relationships between yield monitor data and airborne multispectral digital imagery." Proceedings of Fifth International Conference on Precision Agriculture. Unnumbered.

EXAMINER 	DATE CONSIDERED 
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Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance. Include copy of this form with next communication to applicant.



PATENT  
FORM PTO-1449  
Attorney Docket No.: 57715/03-507  
Page 1 of 2

<b>FORM PTO-1449 (Modified)</b>  <b>SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use several sheets if necessary)</i>	Attorney Docket No.: 57715/03-507	
	Applicant(s): William R. RAUN et al.	
	Title: Use of within-field-element-size CV for improved nutrient fertilization in crop production	
	Serial No.: 10/801,757	Filing Date: 03/16/2004
	Group: 3433	Examiner: Unknown

### U.S. PATENT DOCUMENTS

Examiner Initials		Document No.	Date	Name	Class	Subclass
<del>AA</del>	AA					

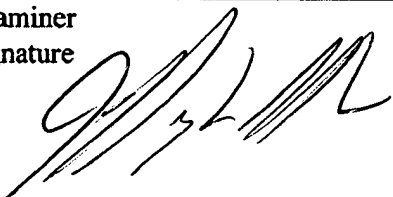
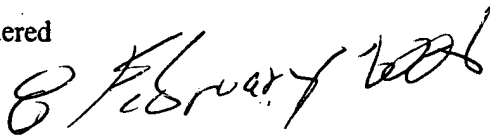
### FOREIGN PATENT DOCUMENTS

Examiner Initials		Document No.	Date	Name (Inventors)	Class	<u>Translation</u> Yes / No
<del>AB</del>	AB	EP 1 429 594 B1	April 2003	Reusch	A01B 79/00	No

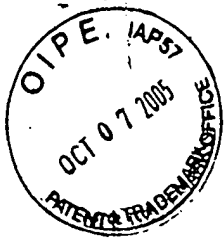
### OTHER ART

Examiner Initial		(Including Author, Title, Date, Pertinent Pages, Etc.)
<del>AC</del>	AC	Hooper, A.W. 1976. A photoelectric sensor for distinguishing between plant material and soil. <i>J. Agric. Eng. Res.</i> Volume 21, 145-155

Examiner Initial		(Including Author, Title, Date, Pertinent Pages, Etc.)
<i>9/16</i>	AD	Industrial Control Applications, March 1991. Infrared sensing and data transmission fundamentals. Motorola. DL412/D, AN1016, pp 349-354; <a href="http://www.web-ee.com/primers/files/an1016.rev0.pdf">http://www.web-ee.com/primers/files/an1016.rev0.pdf</a>
<i>9/16</i>	AE	"Seeing the Light of Nitrogen." <i>Nebraska Farmer</i> . Mid-February 1996, pp 14-16.
<i>9/16</i>	AF	Palmer, J et al. 1971. Automatic control of sugar beet singling and thinning by means of an on-line digital computer. <i>J. Agric. Eng. Res.</i> Volume 16 (2) pp 107-125
<i>9/16</i>	AG	Ritchie, J.C et al. 1992. Airborne laser measurements of rangeland canopy cover and distribution. <i>J. Range Manage.</i> 45:189-193
<i>9/16</i>	AH	Stafford, J.V. et al. 1989. A portable infrared moisture meter for agricultural and food materials: Part 1, Instrument development. <i>J. Agric. Eng. Res.</i> Volume 43, pp 45-56
<i>9/16</i>	AI	Stone, M. et al. ~1994 to 1995. High Speed Networking in Construction and Agricultural Equipment. Web Pub. <a href="http://biosystems.okstate.edu/Home/mstone/hsnet.htm">http://biosystems.okstate.edu/Home/mstone/hsnet.htm</a>
<i>9/16</i>	AJ	Tools with Eyes. Mid-March 1989. <i>Farm Journal</i> . pp 16-18

Examiner Signature 	Date Considered 
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PATENT  
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Page 1 of 2

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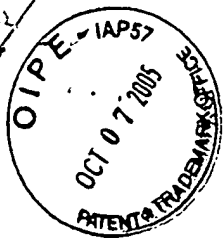
Examiner Initials		Document No.	Date	Name	Class	Subclass
<i>AB</i>	AA	5,850,620	12/15/1998	Skotnikov et al.	702	3
<i>AB</i>	AB	6,178,253	01/23/2001	Hendrickson et al.	382	110

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<i>AC</i>	AC					

### OTHER ART

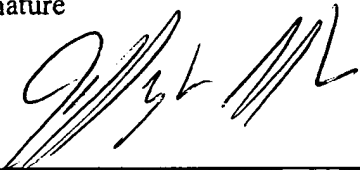
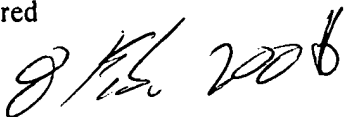
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<i>AD</i>	AD	



PATENT  
FORM PTO-1449

Attorney Docket No.: 57715/03-507

Page 2 of 2

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